

Study of medicinal plants traditionally use in Aundha town of Hingoli district, Maharashtra (India)

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Abstract: The study of the medicinally important plants of the regions author comes to introduce many local native species of medicinal plants. In the study of medicinally important plants having great power concern with the medicine, which help to cure the various diseases said area. *Calotropis procera*, *Vitex negundo* Linn., *Phyllanthus emblica*, *Adhatoda vasica*, *Pongamia pinnata* Linn. Are discussing with respect to scientific name, local names, family, source of plants, distributions, chemical constituents and there uses. All these species are investigated first time as medicinal plants from the Aundha town.

Keywords: Medicinal plants, Aundha Town, Maharashtra

I. INTRODUCTION

The town is well famous for Aundha Nagnath Temple for Shiva, and also it is one of the oldest Twelve Jyotirlingas of India. Aundha town comes under the central part of hingoli-district, Maharashtra. The Aundha town is droughty areas and has poor type of soil, and no average rainfall, due to irregular rainfall prevail in the towns. Commonly, the monsoon period is from the mid June to mid august bringing rains from South-West monsoon coming from Karla. Even in the deficiency of water, we selected this region for the study of traditional medicinal plants. Aundha town has number of rural areas which is rich in flora diversity and has great geographical distribution.

The survey is started in the month of October & December (2018) & collected number of samples of root, stem, leaves, bark, and flower of angiospermic medicinal plants. All these are collected from some rural areas of Aundha town. In nature some plants show poisonous activity and some are non poisonous. It depends on only upon the dose weather or non poison. Medicinal plants have played an essential role in the development of human civilization. Many of the modern medicines are produced indirectly or directly from medicinal plants. Plants are directly used as medicine around the world. Many food crops and plants have medicinal effects. Medicinal plants are sources of new drugs in today's condition. Studying medicinal plants helps to understand plants medicinal uses and conservation the plant for future uses. Cultivation and conservation of medicinal plants protect biological diversity. Plants play great role medicine in India and now they are becoming popular throughout the world because their medicinal uses. People in Asia, America, Russia, Middle East and many other countries outside India are consulted for herbal profession and have started Using plant as a medicines. There are about 70,500 plant species, from algae and angiosperms, bryophyte, pteridophyte, gymnosperm, and angiosperm have been used medical purposes, because they have property or substance, which is medicinally useful. All these plants commonly called as herb. They provide material for the isolation of conventional drugs. In the development of new medicines, biologically active compounds from higher plants have played important role in providing essential raw materials.

From beginning of 20th Centaury due to the discovery of antibiotics and some isolated medicines, the use of plant medicines decrease in many economically developed countries. But now day they show harmful side effects of synthetic/isolated drugs, again about 75% to 90% of the population in the world, started using plants medicine. Near about 140 drugs, all single chemical entities, originally extracted from higher plants are in current use in medicines. The 'herbal drugs' or Ayurveda drugs are generally isolated from single plant extracts and they differ from purely synthetic chemical medicine call 'molecular drugs' or ayurveda drugs. In many Study common plants of medicinally important in Aundha town of hingoli 150 cases indigenous knowledge has been orally passed from generation to generations, from person to person. In my present work an attempt some interesting ethno medicinal observations recorded in Aundha town of hingoli district, Maharashtra, India. While the study of my work, i was taken help from the local tribes; they gave right information of medicinal plants, as they are familiar with the native plants around the area of Aundha town. The study can provide useful information leads for pharmaceutical conformation of these report uses which might in time become useful for human beings as well as other animal. Aundha town is the region under investigation is very rich in biodiversity constitute the districts Aurangabad. The study of medicinal plants was practically neglected from this region due to access use of synthetic drugs.

II. MATERIAL AND METHOD

The study of medicinal plants generally survey, collection of data and observation like this process were used. The study is based on the data collection on common medicinal plants in Aundha-town, district-Hingoli, Maharashtra, India. The survey was conducted in selected region which is nearest me and the study was carried out with elder people of both men and women, chief of town, vaidyas, herbal knowledgeable, and headman. Also taking a sample for detailed interviews was conducted with herbal specialist in the rural areas. At the time of survey rural people shared his valuable information about the medicinal plants. Detail information was collected on the basis of health, social, economic, and cultural aspects of the plants. Generally for the extraction of chemical constituent from the plants four methods are used. To extract chemical constituent isolated from different organs and the tissue of medicinal plants these method are such as distillation, effleurage & maceration, solvent extraction and expression. Survey, collection of data and observation like this method are used to study of medicinal plants in rural area of Aundha town. Out

of the collection and survey made some of the plants frequently occur that's named as *Calotropis procera*, *Vitex negundo* Linn, *Phyllanthus emblica*, *Adhatoda vasica*, *Pongamia pinnata* Linn. Etc. is observed in given area.

When survey of whole town is made there is found numbers of species of medicinal plants in different locality of the town which come under wild and local area of which only five species are taken for the study. The name of the following species is *Calotropis procera*, *Vitex negundo* Linn. *Phyllanthus emblica*, *Adhatoda vasica*, *Pongamia pinnata* Linn. Were recorded and brought such above plants parts like root, bark (scale), wood, stem, leaves, flowers, fruit, and seed and with help of primitive analytical methods recorded chemical constituents and apply for curing a various diseases, such methods are use for the study of medicinal plants.

III. RESULT AND DISCUSSION

In this work five species has been taken into for the study of medicinal plant which is vast use in concern with medicinal values to cure the various diseases. Some common plants like, *Calotropis procera*, *Vitex negundo* Linn. *Phyllanthus emblic*, *Adhatoda vasica*, *Pongamia pinnata* Linn. Etc. All this common plants found in both rural and urban areas of Aundha town, the name of places pericularly mention in the distribution of study area. All this medicinal plants discuss with respect to their scientific name, local name, source, family, and distribution, chemical constituent and medicinal uses.

1. *Calotropis procera*



Calotropis procera

Scientific name: *Calotropis procera*

Local name; Rui, ruchkin, ruva, arka, arki

Source of plant: The leaves, flowers, fruits, bark and seeds are used as drugs.

Family & Apocynaceae

Distribution: it is native of India. In Aundha town rui is found in large scale in rural and small scale in urban places. Some important places like Aundha, Wasteland of Aundha, it is also recorded in garden, School and Colleges and all aundha town etc.

Chemical constituent:

The calotropin are the main active principles. They are carbon tetrachloride, calotoxin, hydroxyketone, Calotropin, Methomyl and cardenolides, cardiaglycoside, etc.

Uses of plant;

Traditionally *Calotropis* is used for common disease such as fevers, rheumatism, indigestion, cough, cold, eczema, asthma, elephantiasis, nausea, vomiting, Diarrhea. According to native vaidya of some Aundha town says that dried plant is a good tonic, expectorant, depurative, and Anthelmintic. The root bark is used for febrifuge, anthelmintic, depurative, expectorant, and laxative. The powder of *Calotropis procera* root used for curing asthma, bronchitis, and dyspepsia. The leaves are useful for treatment of paralysis, arthralgia, swellings, and fevers. The flowers are bitter in taste used for digestion, astringent, stomachic, and tonic. *Calotropis* is also a reputed Homoeopathic drug. The leaves of *Calotropis procera* are insecticidal properties. Fresh leaves juice with salt is mostly use for intestinal worms, jaundice, skin disease, and malarial fever. The leaves are applied for boils, chronic ulcers, swelling and wounds. Bark is used for liver problem, remove round worms. Gum is sticky, demulcent tonic and used in debility. The apical twigs are chewed to maintain good dental hygiene they kill mouth germ. Flowers are used in debility. Fruit is effective for urinary diseases and leprosy. Seed oil of *Calotropis procera* is used for skin diseases like eczema and scabies, preparation soap in industry. The paste of seed used for kill head lice. According to local people the bark, gum, leaves, and seeds are used in scorpion sting. The dried leaves of *Calotropis procera* are used in protect the stored food grain from store grain pests.

2. *Vitex negundo* Linn.



Vitex negundo.Linn.

Scientific Name: *Vitex negundo* Linn.

Local Name: Nirgundi, chaste tree, nagod etc.

Source of plant: The leave, bark, and seeds are used as a drug.

Family; Verbenaceae

Distribution: The plant is found in throughout India, Afghanistan, tropical Africa, Madagascar, China, Aundha is the one of the drought region in marathwada division. It is mainly distributed in important places like aundha, Jawala chandgawan and, near the Cambridge college campus of basmat etc.

Chemical contentuent:

It contain flavones, luteolin-7-glucoside, casticin, iridoid glycoside, The Leaves contain an alkaloid nishidine, flavonoids is the main active principle present in *negundo*, the seed of nirgundi contain hydrocarbons, β -sitosterol, benzoic acid and phthalic acid. Stem bark is yields leucoanthrocyanidins, the root of *negundo* contain a furanoeremophilane etc.

Uses of plant:

The *negundo* has pungent, bitter taste. it also promotes the growth of hair; it is useful in eye disease, digestion, consumption, inflammation, some time it is mostly use for curing enlargement of the spleen, bronchitis, asthma, in children it use as teeth pain relief. The root of *negundo* some farmer used as an antidote to snake venom. The root is considered tonic for febrifuge and expectorant, arthritis, dyspepsia. According to native people nirgundi are used for cough, malarial fever, haemorrhoids etc. The leaves are discutient and are also useful for joint pain. The dried fruit acts as a vermifuge etc.

3. *Phyllanthus emblica*

Scientific Name: *Phyllanthus emblica*

Local Name: Avala, raan avala, *Emblica*.

Source of plant: Fresh and dried fruit & leaves.



Phyllanthus emblica

Family- Phyllanthaceae.

Distribution: Emblica is native plant of India, Srilanka, Bhutan, Nepal, and China. It is found in local area like Aundha and kudala, Kurunda etc.

Chemical constituent:

The fruit of *emblica* is richest in source of Vitamin C. The other important constituents are Emblicanin gallic acid, tannic acid, Glutamic acid, Proline, Aspartic acid, Ascorbic acid gum, sugar, fat, phyllembin, minerals Fe, P, Ca. Bark of *emblica* contain tannin, and the seeds contain essential oil. It is rich citric acid etc.

Uses of plant:

The *emblica* is used for cooling, refrigerant, diuretic, the fresh fruit used to kill intestine worms, pulp of fruit used in to cure the jaundice, dyspepsia, and scurvy. It helps to regulate blood level. It used in dysentery and diabetes. It prevents infection and healing of ulcers. The dried fruit are used in haemorrhage/piles (bleeding), cough. It is used useful in tuberculosis of the lungs. Seed of *emblica* are applied in scabies and itching. Fruit juice is used for hair dye and seed oil for great hair nourishment and fruit juice are used in the preparation of hair oils and shampoos for mankind. Leave are used as a fodder for grazing animals. The fruit are also used in mood swing. Amala also increases white blood cell (WBC) counts with *emblica* tonic.

4. *Adhatoda vasica*



Adhatoda vasica

Scientific Name: *Adhatoda vasica*

Local Name: Adosa, Adulsa, Bashika vasuka etc.

Source of plant: The leaves, flowers, fruit, and roots are extensively used as a drug

Family- Acanthaceae.

Distribution: the plant is Adulsa, is found many regions of India and throughout the world, with a multitude of uses in traditional Ayurved. It is also cultivated for its medicinal properties, in house garden. In India, it is grown in all Aundha towns; it grown in rural as well as urban area also. Like Nanded, Aundha, khandegaon etc.

Chemical constituent:

The main prominent chemical is found in adulsa is alkaloid. Adhatoda leaves are the quinazoline alkaloid known as vasicine in addition to vasicine. The leaves and roots of Adhatoda contain the alkaloids l-vasicinone, deoxyvasicine, maiontone, vasicinolone and vasicinol etc.

Uses of plant:

The great use in traditional medicine to treat respiratory disorders, Extracts of Adulsa's leaves, and roots are useful in treating bronchitis, and other lung and bronchiole disorders, as well as common coughs and colds. It plays an important role in the treatment of tuberculosis. *Adhatoda vasica* has been used for in India as an insecticide. The leaves have been shown to control insect, pests. It is also have wound healing activity. Traditionally it is used for curing asthma, chronic bronchitis etc. Boiled leaves are used to treat rheumatic pain, and to relief the pain of urinary tract infections. It is also believed to local peoples have abortifacient properties. It is used in some parts of Aundha town and other part of district. It is good stimulator for uterine wall contractions, thus it helps to speeding childbirth. A leaves of *Adhatoda* has a soothing effect on irritation in the throat etc.

5. *Pongamia pinnata* Linn.



Pongamia pinnata Linn.

Scientific Name: *Pongamia pinnata* Linn.

Vernacular Name: Karanja, karanj, pongam, Indian beech, Pongamia tree

Source of plant: seed, leaves, flower, and bark of this plant used as a drug.

Family-Fabaceae,

Distribution: It is widely distributed throughout tropical Asia, south eastern Asia, Australia, and India and locally distributed throughout the state of Maharashtra along Banks Rivers. In Hingoli region it is found in proper Aundha, and campus of Cambridge collage basmat.

Chemical constituent:

It is mainly contain alkaloids demethoxy-kanugin, gamatay, glabrin, glabrosaponin, kankone, kanugin, karangin, neoglabrin, pinnatin, pongamol, pongapin, quercitin, saponin, β -sitosterol, and tannin etc.

Uses of plant:

Pongamia seed oil-Applied to skin disease and the like cases of eczema have been benefited by applying a mixture of the oil and zinc oxide on skin. It is mostly used for disease like leprosy, piles, ulcers, chronic fever and in liver pain. Its seed oil is used in rural areas for whooping cough, the leaves of *pongamia* applied as bath or fomentation to rheumatic joints. Leaves of *pongamia* are used in diarrhea and for cough. Juice of leaves is treatment of dyspepsia and diarrhea. The young leaves are applied to bleeding piles. Juice of leaves is used for cold, cough etc. the Juice of stem in remedy for Gonorrhoea .Seed powder valued as a febrifuge, also Useful in inflammations, pectoral diseases, chronic fevers, the flowers- Dried flowers in powder in combination with other ingredients is given as decoction in diabetes and also Useful in ailments of female genital tract etc.

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